

# Submission to the Commission of Inquiry into DNA Testing by Queensland Health Forensic Scientific Services

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## Synopsis

*In a recent Michigan Law Review article Brandon Garrett<sup>i</sup> pointed out that “the crime lab evolved as a law enforcement institution, with scientific trappings that long permitted it to avoid practical, legal, and constitutional scrutiny.” This is now changing, and as a consequence, the Commission of Inquiry into DNA testing at the John Tonge/ QHFSS laboratory is both timely and welcome. The driver has been unacceptable quantitation thresholds in the Shandee Blackburn case. But older cases, including the Fitzherbert case, indicate that the asserted failings of DNA testing at the lab are not isolated instances of error relevant to current testing parameters, but systemic and broader over a longer period of time. These cases demand a more rigorous examination of the use of DNA testing in police and forensic investigation, trials and appeals, in protecting the rights of the accused as well those of victims of crime. Recommendations from such approaches should be made and implemented, especially in regard to re-testing. This would assist in establishing a national approach to any emergence of ‘fresh and compelling’ evidence.<sup>ii</sup>*

## Introduction

On 6 June 2022, the Queensland Government announced that an inquiry would be held into the DNA testing of the Queensland Health Forensic Scientific Services (QHFSS) laboratory, previously known as the John Tonge Centre. The catalyst appears to have been the lab’s failure to get male DNA from samples taken from stabbing victim, Shandee Blackburn, at Mackay in 2013. Blood samples taken at the crime scene by officers attached to the police scientific services section were expected to produce male profiles, but failed to do so. It was revealed that this was because the lab had adopted unnecessarily high threshold levels for the quantitation process. As a result, perfectly useful samples were being discarded, implying serious laboratory inefficiencies. Quantitation is a process designed to determine the amount of amplifiable DNA in the sample. Insufficient DNA quantity, highly degraded DNA, the presence of inhibitors, or a combination of all of these, may cause a PCR amplification to fail. Forensic scientist, Dr Kirsty Wright, found that the problems could be traced to the lab’s adoption of a quantitation floor of 22-cells, whereas other labs were getting full DNA profiles from floors involving 10-cells. Dr Angela van Daal, another forensic scientist, later pointed out that DNA quantitation testing problems at the QHFSS laboratory had been a concern over a long period of time, of the order of two decades. If that is so, a number of cases, in addition to that of Shandee Blackburn, could have been adversely affected by faulty laboratory procedures. This submission maintains that any Commission of Inquiry into problems into the DNA testing at the QHFSS laboratory would be deficient unless (some of) those earlier cases are also re-examined.

This submission supports an inquiry into one particular case, namely, that of Andrew Fitzherbert who was convicted of the stabbing murder of Queensland Cat Protection Society president, Dr Kathleen Marshall, in February 1998. Fitzherbert’s conviction was solely based on a DNA analysis of five drops of blood by the John Tonge Centre, conducted by scientist, Kenneth Cox. Circumstantial evidence raised at Fitzherbert’s trial indicating his innocence was held to be secondary to the DNA

evidence indicating his guilt. At that early stage almost 25 years ago, when DNA evidence was first being introduced into trials involving homicide, some juries were so fascinated by the 'mystical infallibility' of DNA that they tended to downplay other evidence. One piece of research reported that juries were 23 times more likely to convict in homicide cases where DNA evidence was admitted.<sup>iii</sup> There seems little doubt that this applied in the case of Fitzherbert, which was one of the first homicide cases to be tried in Queensland using the Profiler-Plus technique. If the aim of the present Commission of Inquiry is to ensure justice was done in cases which were adversely affected by inappropriate QHFSS lab procedures, it is argued that a possible longer-term miscarriage of justice involving Fitzherbert may be avoided if his case is re-examined.

### **The Shandee Blackburn Case and QHFSS Lab Problems**

As a consequence of the QHFSS decision about quantitation protocols leading up to the Shandee Blackburn case, scientific staff at the laboratory were permitted to dis-continue sample analysis when quantitation results indicated a sample with fewer than 22 cells. The lab's justification for this particular protocol was their belief that continued testing would result in a low success rate of about 1.8%. When the QHFSS decision on quantitation thresholds was challenged in 2019, the Queensland police asked a laboratory in NSW to re-test some of those particular Queensland samples which had been abandoned. The NSW lab did so and reported a success rate of around 30%.

Dr Wright has stated that she believes that these issues at the Queensland lab are systemic and that they continue today. If so, the Queensland laboratory is operating less efficiently than its southern counterparts, and people guilty of serious crimes are being permitted to go free. The seriousness of the problem was made explicit when Dr. Wright lodged a formal complaint with the Crime and Misconduct Commission about official misconduct in the running of the QHFSS laboratory.

### **Earlier Problems at the John Tonge Centre**

In 2019, Dr Angela van Daal, had pointed out that quantitation problems had existed at the lab when it was known as the John Tonge Centre. The earlier problems were different from the current problems, but the common denominator, both then and now, can be traced to poor management. The governance of forensic science laboratories in the different Australian states varies considerably. In NSW and Queensland, the forensic laboratories come under the State Department of Health. This has certain disadvantages. One is that forensic and scientific services are only a small part of a much larger department and therefore funding is a problem. Another, perhaps more important disadvantage, is that Health Department managers lack specialised knowledge of forensic work and are often at odds with the scientists and technicians who run the laboratories. In John Tonge Centre days, the scientists in Forensic Biology regarded their Queensland Health managers as 'forensically illiterate' because they lacked suitable qualifications in molecular biology, they were not familiar with the intricacies of the technical equipment used, and they did not have a clear idea which scientists or technicians under their care lacked the training or the experience to operate and maintain all of the machines at peak efficiency.<sup>iv</sup>

The lab's problems were revealed publicly for the first time in the Frank Button case, which became a *cause celebre* in the annals of criminal justice in Queensland.<sup>v</sup> Frank Button was an aboriginal man from the Cherbourg mission near Kingaroy in Queensland, who had been convicted of the rape of his thirteen-year-old niece, Leatisha. Button had been convicted after a trial where critical DNA

evidence was available but not used. Button served ten months in jail before he was granted an appeal when new DNA testing proved his innocence. One of the three Court of Appeal judges, Williams J, was scathing in his criticism of the failure of the DNA testing by John Tonge Centre scientists. Williams J pointed out that if the Centre had properly tested the DNA evidence during the investigation process, Button would have been cleared of any involvement in the matter and this would have avoided a miscarriage of justice.

In 2001, senior scientist Ron Grice explained how the management problems at the Centre had led to the laboratory failures. In a letter dated 18 June 2001 to Inspector Dan Mahon of the Crime and Misconduct Commission, Ron Grice wrote:

*In setting up our differential lysis technique many years ago before I came to the section, it was found that sperm were reluctant to be dislodged from medical swab fibres. The solution was to twirl the fibres in the extract with two round sticks, side by side. Failure to twirl, or failure to twirl enough, meant the all-important sperm were left on the fibres, which were discarded as part of the procedure. Starting with the (Frank) Button case, I processed seven rape cases in quick succession. I noticed I was not getting profiles for the sperm even when they were in high numbers. Nor could I attribute the failure to inhibiting substances. In the Button case the problem was exacerbated by the ratio of female cells to sperm cells...Quality Technical Officer, Ken Cox, whose duty it was to investigate such problems found that the technicians had subtly changed the technique and largely left out twirling. Some shook the samples on a shaker, either singly or as a bunch on a small rack. The bottom line was that the sperm (remained stuck to the fibres) and were thrown out! ...So, with my three initial runs for the Button case prior to trial, my samples for this and the other six rapes would have been affected by (poor) operator technique.*

On the day that Button's appeal was upheld, the Director of Public Prosecutions asked the chair of the Crime and Misconduct Commission to investigate the circumstances which had led to the wrongful conviction of Button. This led to the publication of a report entitled, *Forensics Under the Microscope*. This report made certain recommendations although it failed to address the sole reason for its existence, namely, why had the sperm which were intact and visible in the vaginal and vulval swabs taken from Leatisha shortly after the alleged rape, failed to produce a male DNA profile?

Similar problems at the laboratory had been revealed in May 2002, when an audit was undertaken by the Audit and Operational Review Branch of Queensland Health. This audit found that staff at Queensland Health Forensic and Scientific Services (QHFSS) were affected by "adverse publicity, high workloads and a perceived lack of management support resulting in low morale amongst staff." The audit report concluded:

*There appears to be a lack of leadership and a cohesive management team able to address the key issues facing forensic sciences. The management structure needs to be urgently reviewed...In terms of the Director there appears to be no leadership to address key concerns within the forensic area and (the Director) is perceived by staff as only a figurehead who has not been seen in the laboratories...(also) the lack of confidence among staff with 'the Manager Forensic Services' and the reported instances of poor communication make it difficult to provide a cohesive management team. A further impediment to an efficient service is the lack of integrated information systems which can track samples between QPS*

*and QHFSS and also between the forensic areas on campus. Audit examined a number of case files... (in Forensic Biology) and evidence indicates that in many cases the (administrative) review can be after the report has been sent, and in some cases no administrative review was undertaken. This is in breach of the Standard Operating Procedure.*

The 2002 audit report resulted in a re-organisation. The management team was disbanded and Dr Charles Naylor, a pathologist, was appointed to head the forensic sections. The laboratory problems continued below the surface with management again successful in keeping them 'in house'. Nevertheless, workplace dissatisfaction increased and three years later an internal report written by DNA scientist Deanna Belzer<sup>vi</sup> was leaked to the media. Ms Belzer's complaint related to improper operation and maintenance of equipment and mirrored a similar complaint made three years earlier by fellow DNA scientist, Ron Grice. Ms Belzer focussed on the quantitation process. In 2004, the John Tonge Centre had acquired the Quanti Blot Human DNA Quantitation kit. Ms Belzer claimed that the quantitation process had not been validated and was inaccurate. When reagents or parts for the machine became difficult to obtain the laboratory switched to a kit put out by Applied Biosystems Inc. But little or no validation was done on the new equipment and the DNA results obtained were either 'no visible product' or partial profiles. A large number of samples were re-tested at a cost of around \$60,000. Subsequent investigation revealed that the quantitation results were incorrect and too little DNA was being injected to get a full profile. Ms Belzer also claimed that scientists at the John Tonge Centre may be breaking the law by falsely declaring in evidentiary certificates that all quality assurance procedures were followed, that their results were accurate, and that the equipment was functioning reliably.

The Beattie Government was alerted and responded to the public airing of problems by appointing a Ministerial Taskforce to investigate. The Taskforce Report, later known as the Forster Report, was released on 10 October 2005. This report was made secret by the Beattie Government but its recommended 'Actions' were made public. Some of those Actions dealt with the problem of contamination which had been exacerbated by a lack of adequate control at the many collection points around the campus for the receipt of crime scene samples and other evidence. The Forster Report dealt with this in its Chapter 7, as follows:

*All samples...are (now) delivered to the Central Property Point at QHFSS. The recent establishment of this facility has improved efficiency as all forensic samples are now delivered to one location rather than to separate laboratories around the campus...Receipting procedures have been implemented...Now this is centralised, all procedures...need to be standardised to ensure efficiency is achieved.*

Another action in the Forster Report relating to contamination involved the layout of the laboratory which was thought to contribute to the possible contamination of crime scene and reference samples. It was recommended that in future crime scene samples and reference samples were to be stored in different locations at the laboratory, and the Director was given the task of ensuring that all contamination issues were resolved by 31 January 2006.<sup>vii</sup>

A new Director, Greg Shaw, was appointed and set about the task of restoring public confidence in the Centre's work. However, not all problems were resolved, because, in 2009, the Acting Queensland Police Union President, Ian Leavers, expressed 'grave concerns' about the storage and

processing of the DNA profiles of their own members. In July 2008, police had been asked to provide their samples for exclusion purposes, so that if any police officer's DNA was identified in a sample it could be ignored. But the 'grave concerns' held by the Police Union led the Union to advise police officers to "withdraw consent for their samples to be used".<sup>viii</sup>

### **The Case of Andrew Fitzherbert**

The laboratory problems at the John Tonge Centre mentioned above were already affecting scientific analysis when Andrew Fitzherbert was arrested for the stabbing murder of Queensland Cat Protection Society president, Dr Kathleen Marshall in 1998. They played a part in his July 1999 trial, as well as in his (self-conducted) appeal in May 2000. Nor was the laboratory NATA accredited at the time of his trial. The problems were still largely unknown to outsiders, such as Fitzherbert's defence team, because John Tonge Centre management was successful in keeping them 'in house'.

Fitzherbert had been convicted in 1999 solely on the basis of the results of DNA tests using Profiler-Plus. This technique had only recently been introduced in Queensland, and the Fitzherbert case was one of the first occasions it had been used in a murder trial. Profiler-Plus analysed 9 loci from 9 different chromosomes, and included a gender marker.<sup>ix</sup>

At Fitzherbert's appeal in May 2000, Fitzherbert claimed that he had been the victim of fraud. The Appeal Court judges summarised his claims succinctly as follows:

*"(Fitzherbert's) contention is that he was convicted by deliberate fraud on the part of the staff of the laboratory, by whom the profiling was done, and in particular by fraud on the part of the scientist in charge of the case, K J Cox."*<sup>x</sup>

It seems fair to say that Fitzherbert, when he went to trial in 1998, was adversely affected by two recent developments in the lab's history. The first instance related to the management and technical problems in the laboratory which analysed his DNA. The second involved the scientist, Kenneth Cox, who had full control of that process. Mr Cox had played a similar part in the recent 1997 Queensland Supreme Court trial of Marc Andre Renton and Brunetta Festa. In that trial, he had acted as an expert witness for the prosecution, and his evidence was claimed to involve serious errors. These errors were later made explicit by Professor Barry Boettcher.

In a Statutory Declaration sworn by Professor Boettcher at Newcastle in the state of NSW on 26 July 2000, Boettcher had said: "It is apparent that, at the trial of Mr Renton, the court was given wrong scientific opinion (by Mr Cox) about the possible presence of DNA originating from Mr Renton being found on the balaclava." One month later, Professor Boettcher ramped up his criticism, writing to the Queensland Attorney-General and Minister for Justice, as follows: "During the trial (of Renton) the forensic expert (Mr Cox) gave his expert opinion on two points, that the DNA came from more than two people and that, if the DNA had come from only two people, both of the accused would be excluded...Both of these opinions were repeated by (Mr Cox) during his testimony. Both of these opinions are false."<sup>xi</sup>

When the Attorney-General failed to act, Professor Boettcher followed up with a letter dated 21 March 2003 to the Crime and Misconduct Commission, writing: "I am concerned about the wrong scientific opinion given to the court by Mr Cox. It is not only wrong, but I consider that Mr Cox must have known that he was giving wrong scientific opinion."<sup>xii</sup>

Fitzherbert's case should have proceeded independently from both these matters, but it appears that it did not. Fitzherbert, and aggrieved supporters, contend that he was a victim of poor management and technical practices at the laboratory, and (after Renton) he may have been a second victim of poor scientific analysis by Mr Cox. With the benefit of hindsight, both appear to support Fitzherbert's argument that he was a victim of fraud. However, exactly what was wrong with his DNA evidence (assuming that contention is correct), remains difficult to discern.

### **The Crime and the Investigation**

The murder of veterinarian Dr Kathleen Marshall took place in Brisbane in February 1998, in the small surgery underneath her residence in the middle-class suburb of Wilston. Marshall had been stabbed 52 times in what was obviously a frenzied attack. Police investigators quite rightly said that whoever attacked Marshall had very strong feelings against her. Fitzherbert denied ever knowing Kathleen Marshall, and claimed that he never been to her residence nor had he ever been in her surgery. Other evidence supported Fitzherbert's claim of innocence. Fitzherbert had no criminal record and had never been in trouble with the law. Character witnesses attested to his peaceful and non-violent nature. More specifically, on the evidence presented by six witnesses involving a total of eleven sightings, Kathleen Marshall had been killed sometime between 4.45 pm and about 7 pm on Friday 27 February 1998, and Fitzherbert had a very good alibi for that time interval.<sup>xiii</sup> In fact, he had a very good alibi from early Friday afternoon through to about 1 am on Saturday morning. He was never alone over that period of time and a number of people vouched for his whereabouts at various times during that interval. If their evidence had been accepted, and there seems no apparent reason why it should not have been, then Fitzherbert could not have been anywhere near the crime scene at the relevant time when Kathleen Marshall was killed. There was also no evidence that Fitzherbert had ever met Kathleen Marshall, and certainly no evidence that he had a motive to kill her. There were no eye-witnesses to the murder and no murder weapon was ever found.

Kathleen Marshall's body was not discovered until mid-afternoon on Sunday 1 March 1998, but it was apparent at the Monday morning autopsy that she had been dead for some days. At Fitzherbert's trial in July 1999 the prosecution and the defence presented vastly different estimates of her time of death. The prosecution argued (on the evidence of entomologist Russell Luke) that Marshall had been killed on the night of Thursday 26 February 1998 or early on the following (Friday) morning. Fitzherbert's defence counsel argued that, on the evidence of six eye-witnesses (involving a total of eleven sightings) who testified that they saw Marshall going about her normal business at various times on Friday 27 February 1998, that she was definitely alive at least until 4.45 pm that Friday afternoon. The defence counsel argued that the court should accept the evidence of these six witnesses, because all of them knew Kathleen Marshall well and all were independent of Fitzherbert. He concluded that since Fitzherbert had a very good alibi for that Friday (including the Friday night) Fitzherbert had no opportunity to commit the murder.

In contrast, Prosecutor Rutledge told the jury:

"When I opened the prosecution case to you I told you the prosecution is unable to tell you exactly when Kathleen Marshall was murdered, unable to tell you the precise circumstances surrounding her death and unable to tell you the motive for her death...but I've told you I don't have to prove that...The prosecution does not have to prove that. The prosecution ...has to prove a murder, nothing more nothing less...(and) Andrew Fitzherbert has left traces of himself at the scene of Kathleen Marshall's murder. That blood...reveals him as being guilty of murder."<sup>xiv</sup>

Rutledge dismissed the evidence of the six defence witnesses as follows:

“Now if those witnesses are accurate...Kathleen Marshall could not have been killed at the earliest until sometime late Friday afternoon...Well we don't have video cameras there to say whether they are accurate or not. We all have our experiences of life, however. Where on occasion...we say, 'Oh, hi, George,' and whatever, and it turns out to be someone you don't know, or you've got your days mixed up or whatever.”<sup>xv</sup>

Faced with having to decide between the blood evidence of the prosecution (involving Fitzherbert's DNA) which apparently placed Fitzherbert in Marshall's surgery at some point in time, versus the alibi evidence offered by the defence, the jury sided with the prosecution. They found in favour of the DNA evidence despite Fitzherbert's alibi. They found Fitzherbert guilty of the murder of Marshall.

### **The DNA Evidence**

At Fitzherbert's trial the exculpatory evidence was glossed over, whereas the DNA evidence was given centre stage. The police scientific services officer, Sergeant Holohan, delivered 26 swabs from the Marshall crime scene to the John Tonge Centre on Tuesday 3 March 1998. Only 11 of those swabs gave a DNA profile. Kenneth Cox, the only DNA scientist to give evidence at the trial told the court that the crime scene samples from Kathleen Marshall's surgery yielded five drops of blood which matched Fitzherbert's DNA profile which Cox had obtained from Fitzherbert's reference blood after Fitzherbert had been arrested. Mr Cox calculated a random match probability of one in 3.8 thousand billion and told the court that this amounted to 'effective individualisation.' At Fitzherbert's trial the defence did not call a DNA expert to challenge Mr Cox's testimony. There was no money to do that because Fitzherbert was dependent on legal aid. Consequently, at trial, the jury heard DNA evidence only from the expert witness for the prosecution.

The jury's decision to convict Fitzherbert came as a shock to many people who had followed the matter closely. Many close to Fitzherbert were unable to see any connection between Fitzherbert and the victim. Fitzherbert had never attended any meetings of the Queensland Cat Protection Society, and he and his partner did not use Kathleen Marshall as their vet - instead, their vet was at Boondall, a suburb some distance away. After Fitzherbert had been in jail for some years, doubts began to be raised publicly about certain aspects of the police investigation and the possibility that Fitzherbert had been wrongly convicted.

These doubts focussed on the DNA evidence. Three other DNA experts who were consulted (but who did *not* appear at Fitzherbert's trial), were highly critical both of Mr Cox's analysis of the crime scene samples as well as of his conclusions. One expert, Ms Carol Mayne, said that the relative fluorescent units of several alleles that Cox had presented as belonging to Fitzherbert were below manufacturer's minimum specifications and should not have been admitted as evidence.<sup>xvi</sup> Another expert, Dr Bentley Atchison, who had examined Mr Cox's working papers, not only claimed that there were discrepancies between Mr Cox's working papers and his reported results, but also claimed that Mr Cox's assertion that the stains came from the accused and from no one else could not be justified. Dr Atchison supported this latter point by quoting an eminent statistician (Dr Ian Evett) who referred to any claim of 'individualisation' based on a 9 loci Profiler-Plus match as 'arrant garbage.'<sup>xvii</sup> Dr Atchison's report amounted to a serious attack on Mr Cox's competence.<sup>xviii</sup> And all three experts (the third was Dr R. J. Mitchell of Latrobe University) were united in claiming that Mr Cox had made serious errors in calculating the random match probabilities (RMP) which he had presented to the jury and which influenced their guilty verdict.<sup>xix</sup>

Subsequent research findings about the Profiler-Plus loci corroborated the criticisms made by all three experts and confirmed that Mr Cox had made incorrect assumptions about the population used in the RMP calculations, including incorrect assumptions about the independence of the 9 loci in the Profiler-Plus test, plus incorrect assumptions about the independence of the alleles at each of the loci. These mistakes had passed unnoticed at Fitzherbert's trial because in 1998 the Profiler-Plus System had only recently been introduced, and because Mr Cox was the only DNA expert in the courtroom. The defence did not have a DNA expert to offer a critique of his claims, and those claims were instrumental in the jury's decision to convict Fitzherbert.

Fitzherbert spent most of his 15 years-and-6-month incarceration at Wolston prison in the Brisbane suburb of Wacol. Author, Ted Duhs, interviewed Fitzherbert there on more than 40 occasions over a five-year period from 2008 to 2012. Duhs became convinced that Fitzherbert was innocent of the murder of Kathleen Marshall and wrote about the case in his 2012 book *Crucial Errors in Murder Investigations*. On one occasion during a visit to the prison, Duhs said that he and Fitzherbert were discussing the DNA evidence against Fitzherbert, when Fitzherbert said:

*"You don't know that I didn't kill Kathleen Marshall, but I know that I didn't kill Kathleen Marshall, so there must be something wrong with the DNA."*

#### **Fitzherbert's Contentions at his Appeal in May 2000**

Unfortunately for Fitzherbert, he was unable to prove the claims of fraud he made at his appeal, and the Appeal Court judges quickly rejected them. But Fitzherbert felt that he had good reason to make such claims. Fitzherbert surmised that, between March and June 1998, when Mr Cox was testing the samples from the Marshall crime scene, he entered the date, as well as the DNA number of the various crime scene samples into the journal, but did *not* enter the results of the profiles of the crime scene samples that he obtained from the analysis. Fitzherbert claimed that, for each of the five crime scene samples tested which led to his conviction, Mr Cox left blank the relevant lines for the recording of the alleles in the 9-loci profile. Although it was very serious to accuse a scientist of malpractice when there was no way of proving such an accusation, Fitzherbert asserted that his accusation should be taken seriously, because in the Marshall case, unlike in other cases at the John Tonge Centre at the time, Mr Cox had sole control of the DNA testing, and sole access to the recording of the results in the journal.

At Fitzherbert's trial, Mr Cox had told the court that the John Tonge Centre had a system whereby one technician would enter the data and another would double-check it. But authors, Paul Wilson and Dianne McInnes, who wrote the first book about the Marshall murder, *Five Drops of Blood*, say that all of the entries for the Marshall murder were made by Cox. They say that, contrary to John Tonge Centre laboratory practice which required checking by a colleague, there was no evidence that any other scientist had checked any of Cox's analytic work in the Marshall case. Checking and confirmation should have been carried out, but according to them, it wasn't. Wilson and McInnes wrote:

*"...all the entries for the Marshall murder were made by Cox. The profile collation sheets had also been worked on by Cox alone...There was no signature or other evidence to indicate that these sheets had been double-checked, or looked at by anyone other than Cox".<sup>xx</sup>*



Fitzherbert pointed out that an absence of checking by any other scientist supported his claim that Mr Cox had the *opportunity* to fake the results. But Fitzherbert went one step further by claiming that Cox *did* in fact fake the results in this way. Fitzherbert claimed that the relevant lines in the journal reserved for recording the DNA profiles of the Marshall murder were only filled in *after* his profile had been obtained from his reference blood in July 1998. Fitzherbert claimed that only then were the relevant lines in the journal filled in, and they were filled in with his (Fitzherbert's) DNA profile. Fitzherbert also surmised that after Mr Cox obtained his reference blood sample in July 1998 he *may* have added drops of Fitzherbert's blood to the relevant crime scene samples so that if they were ever re-tested they would confirm Mr Cox's claim that Fitzherbert's DNA had been present in the crime scene samples.

Fitzherbert maintains these claims today, more than twenty years on. They are highly defamatory of Mr Cox, and supporters of Fitzherbert tend to shy away from them. But given that Fitzherbert was convicted solely on DNA evidence, and other evidence which pointed to his innocence was largely ignored, they warrant scrutiny.

Fitzherbert was not initially a suspect in the police investigation of the Marshall murder. But when the police focussed on members of the Queensland Cat Protection Society, including the male partners of members, Fitzherbert was amongst those questioned. Police asked him, "Are you willing to give a DNA sample?" He responded, "Is it compulsory?" The police answered, "No, it is not compulsory." Fitzherbert replied, "Well, in that case, I won't." Fitzherbert told the author at a much later stage that he declined because he didn't know what the police would do with any DNA sample that he might provide. He said he was just being careful. He also said later, that given what had subsequently happened to him, he was right to decline.

Nonetheless, his refusal aroused suspicion and police began to target him. They applied to a magistrate to enter his home and take possession of some personal items so that they could get a DNA sample from those items. This application was refused by the magistrate. So, police arrested Fitzherbert and on Wednesday 1 July 1998 that same magistrate authorised a search warrant for Fitzherbert's house. The police took away personal items including a toothbrush, a handkerchief, a pair of socks, bed sheets and pillow cases. These items were delivered to Mr Cox at the John Tonge Centre for testing on the morning of Thursday 2 July 1998.

Events were now moving very fast for Fitzherbert, because that same morning *The Courier Mail* had carried a front-page news item, "Catwoman DNA Court Bid Fails." In that article, journalist Sara Bradford wrote, "Police said Mr Fitzherbert refused to supply the sample several weeks ago, forcing them to use their new powers to arrest him (and seize personal items)".

### **Support from Civil Libertarian Terry O'Gorman**

Fitzherbert's lawyer, civil libertarian Terry O'Gorman, complained to the Criminal Justice Commission that police unlawfully arrested his client and misused the media to portray him as Dr Marshall's killer. Mr O'Gorman said police "seriously misused" their powers.<sup>xxi</sup>

The point is that Fitzherbert was named in Queensland's major newspaper as the prime suspect in the Marshall murder *before* there was any evidence against him: in particular, *before* his DNA was obtained by Mr Cox from his analysis of Fitzherbert's personal items. It was only late on the

afternoon of the following day (Friday 3 July 1998) that Mr Cox contacted police and said, "I've done the DNA analysis and I've got a match." Police then charged Fitzherbert with Marshall's murder on the Saturday.

Fitzherbert maintains that the police misused the media to portray him as Marshall's killer, and he surmises that Mr Cox might have been influenced by this when he carried out the DNA test and claimed a 'match'.

These issues that Fitzherbert (and Terry O'Gorman) raised in Queensland more than twenty years ago have been downplayed ever since, and they were largely forgotten after Fitzherbert went to jail in 1999. But they do bear on recent US research by Brandon Garrett relating to the place of the crime lab in the law enforcement process. Garrett writes: <sup>xxii</sup>

*The crime lab evolved as a law enforcement institution, with scientific trappings that long permitted it to avoid practical, legal, and constitutional scrutiny. That model is now changing as crime labs have become important state and national players in criminal justice. As a result, crime labs are slowly becoming more closely regulated legally and subjected to more scientific oversight...Many scholars and forensic scientists have called for a broader change in creating a 'research culture' for crime labs, particularly following the recommendations of the National Academy of Sciences in a prominent 2009 report.*

Fitzherbert believes that if he had not been publicly identified as the prime suspect in the Marshall murder *before* his personal items were analysed for DNA, it is unlikely that any scientist would have claimed a 'DNA match' without qualifying such a claim.

Many of Fitzherbert's supporters (who, to this day, have never wavered in their belief that he is innocent) prefer a different explanation. They prefer to believe that the Profiler-Plus DNA test used in 1998 may not have been discriminatory enough to identify the perpetrator. They point out that one expert witness (Ms Carol Mayne) said that the strength of certain alleles reported by Mr Cox as identifying Fitzherbert were below the minimum specifications stated by the manufacturer; and that another expert witness (Dr Bentley Atchison) said firstly, that there were discrepancies between Mr Cox's working papers and his reported results, and secondly, that Mr Cox's claim of 'effective individualisation' was nonsense. As well, all three expert witnesses (Ms Carol Mayne, Dr Bentley Atchison and Dr Mitchell) were adamant that Mr Cox's calculations of random match probabilities were seriously in error. The true random match probability was later estimated by a West Australian scientist to be about 1 in 100,000. As a result, in a city the size of Brisbane, it is possible that several males could have shared the same 9-loci DNA profile which convicted Fitzherbert.

In 2013, Taiwanese man, Chen Long-Qi, was successful in persuading the Taiwan Association for Innocence to procure a more discriminatory DNA test in his case, and it was this which proved his innocence. Elsewhere, similar opportunities have been given to others and similar outcomes have resulted.

For instance, in England since 1997, the Criminal Cases Review Commission has referred more than 700 'claimed miscarriage-of-justice' cases to the court of appeal, and this has resulted in more than 400 convictions being set aside. Innocence Projects in the US since 1991 have had similar success. At the latest count, almost 400 prisoners in US jails for homicide or rape, had been exonerated after post-

conviction DNA testing had proved their innocence. As a result of this the law has been changed in some US states to make it easier for prisoners no longer incarcerated to access DNA testing. For instance, *The Innocence Project In Print* reported a few years ago that Dion Harrell, a New Jersey man, who was wrongly convicted of rape in 1991 and who was forced to live as a registered sexual offender after serving 5 years in prison, was given an opportunity to clear his name when the Innocence Project at Yeshiva University was instrumental in getting a law passed in New Jersey that gives people no longer incarcerated access to DNA testing. Dion Harrell was tested and results revealed that he was innocent of the crime for which he was convicted.<sup>xxiii</sup>

### **Recent 'Right of Appeal' Legislation in Other Australian States**

The avalanche of wrongful convictions revealed in the UK and the US over the last three decades has not been replicated in Australia. As a consequence, there has been little enthusiasm in Australia for introducing new 'right of appeal' legislation similar to that of other countries. Only two Australian states have adopted similar measures, namely South Australia and Tasmania. The South Australian Parliament passed a bill on 19 March 2013 to provide the right to a further appeal in criminal cases in which legal avenues had been exhausted, provided that the applicant could show that there was 'fresh and compelling' evidence. Tasmania adopted similar legislation two years later.

'Fresh evidence' is defined as that evidence "which was not adduced at the trial and could not, even with the exercise of reasonable diligence, have been adduced at the trial. 'Compelling evidence' is reliable, substantial and highly probative in the context of the issues at trial."<sup>xxiv</sup>

This definition might suggest that errors that are able to be identified from the trial transcript are not 'fresh' in the legal sense. But this is not so. The test of 'fresh evidence' was clarified by Peek J in *Drummond*, a South Australian case dating from 2010.

Peek J said that:

"The accused in a criminal trial is entitled to depend upon the prosecutor (and expert witness) acting in accordance with their legal duties as laid down by the common law and the professional codes of conduct. If it is subsequently discovered that they were in breach of those duties, then that discovery constitutes fresh evidence."<sup>xxv</sup>

Henry Keogh, who spent more than 20 years in prison for the murder of his fiancé, Anna Cheney, was the first South Australian prisoner to be exonerated after an appeal under this new law. It was held that the trial court and jury had been materially misled by the evidence of Dr Colin Manock, the expert witness for the prosecution. Adrian Drummond was the second South Australian ex-prisoner to be exonerated. Drummond had been convicted of attempting to abduct a schoolgirl whilst she was walking along a road in suburban Adelaide. Drummond's first appeal failed. However, at his second attempt under the new law, Drummond claimed that the limitations of the DNA evidence given at trial by the expert witness were not fully disclosed to judge or jury. The court agreed, and it was held that the forensic evidence given at trial was false and misleading. Drummond's second appeal was allowed.

Fitzherbert believes that an acquittal could be achieved in his case if he was given a similar opportunity. But there are difficulties for Fitzherbert, because as a Queenslander, he lives under a more conservative jurisdiction, and Queensland has, so far, given no indication that it will follow the

South Australian and Tasmanian new right of appeal initiatives. This adds to the difficulty that all convicted defenders face in persuading criminal justice authorities to re-examine the correctness of a conviction, especially post-appeal. In August 2010, the Queensland Government published *Guidelines for Applications to the Attorney-General to Request Post-conviction DNA Testing*. These guidelines do *not* allow re-testing of biological material if the original samples had been tested using the Profiler-Plus System. The reason given is that Profiler-Plus testing is held to be rigorous and definitive.

Profiler-Plus was introduced in DNA laboratories in late 1997. Consequently, the crime scene samples in the Marshall murder were among the first to be tested using the Profiler-Plus system. If Fitzherbert is to be given an opportunity for a re-test of the Marshall murder crime scene samples, his defence team will not only have to demonstrate that the initial assumptions underlying the independence of the Profiler-Plus loci, which at trial were accepted by expert witness, Kenneth Cox, have since been shown to be false, and, therefore that Profiler-Plus is not as discriminatory as initially thought; but also, that the test itself is only one factor that could be responsible for a false result. A number of other factors (such as 'noble cause' corruption, a wrong interpretation of the results, possible contamination, operator error, bad lawyering, etc) – any one of these could have contributed to a false result in Fitzherbert's case.

Some other Australian states have indicated that they intend to follow the South Australian and Tasmanian initiatives. For instance, former West Australian Attorney-General, John Quigley, said he would be willing to draft legislation similar to the South Australian model.<sup>xxvi</sup>

And Justice Michael Kirby has lent his support. He said, "I hope that other jurisdictions in Australia will take steps to enact legislation for the same purpose. Wrongful convictions and miscarriages of justice haunt the conscience of a civilised society."<sup>xxvii</sup>

### ***Farah Jama and Implications for Fitzherbert***

Farah Jama had been convicted of raping a 48-year-old Australian woman (code named 'Maria') in the toilet of a Melbourne suburban night club known as 'Venue 28', in the suburb of Doncaster in 2006. His DNA was present in a vaginal swab taken from 'Maria,' the suspected victim of the rape. The DNA evidence was the only evidence against him at trial. The prosecutor in the case claimed that the probability of getting the same DNA profile from a person chosen at random from the population was one in 800 billion. The jury was impressed by the infinitesimal nature of the random match probability and convicted Farah Jama of the rape of 'Maria'. He was sentenced to six years with a non-parole period of four years. Farah Jama spent 16 months in prison before an independent investigation revealed that contamination had occurred at the laboratory bench of the rape crisis centre at Austin hospital. An inquiry revealed that the same doctor (Dr Nicola Cunningham) had examined two suspected, but unrelated, rape victims on successive days. The teenage female victim in the first examination ('Taylah') had engaged in consensual oral sex in the back seat of a car with three young Somali students (including Farah Jama), although no penetration had taken place. Taylah's hair and clothing were covered with sperm from the free-for-all oral sex in the back seat. She made a complaint and was sent to the rape crisis centre at Austin Hospital. After she was examined by Dr Cunningham, unused slides had been left, uncovered, on the doctor's desk. A minute particle of Farah Jama's DNA from the sperm particles in 'Taylah's' hair from that examination had landed on the uppermost slide on the desk. When that slide was used by Dr Cunningham twenty-four hours later in the examination of 'Maria', the slide showed Farah Jama's DNA mixed with 'Maria's' DNA. That was enough to convict

Farah Jama at trial despite his claim that he had never been to the 'Venue 28' night club at Doncaster, and did not know 'Maria,' the 48-year-old female concerned. The papers relating to Farah Jama's appeal had been sent to Brett Sonnet, an Associate Crown Prosecutor in the Victorian Office of Public Prosecutions. Sonnet suspected that something was wrong and his investigation revealed the cause of the contamination. Farah Jama was cleared on appeal in 2009. Justice Vincent, who conducted a report <sup>xxviii</sup> on the Farah Jama case, wrote:

*"In this case, the obviously unreserved acceptance of the reliability of DNA evidence appears to have so confined thought that it enabled all involved to leap over a veritable mountain of improbabilities and unexplained aspects that...could be seen to block the path to conviction."*

Justice Vincent recommended:

*"a series of changed evidence-gathering processes, (and he) saw it as obvious that no one should ever be convicted on the basis of DNA evidence alone, not least because of the inevitable, albeit often small possibility, that someone else might match any DNA profile".* <sup>xxix</sup>

After the Farah Jama case, the Victorian Director of Public Prosecutions issued an instruction that in all cases depending solely on DNA evidence the matter is to be referred to him for consideration and personal approval of the prosecutor.

## **Conclusion**

Many critics believe that Andrew Fitzherbert's defence team at trial should not have allowed his fate to depend so heavily on the DNA evidence presented by the prosecution. They accept that there was no money to engage a DNA expert to represent the defence because Fitzherbert was under legal aid, but they argue that the testimony of six eye-witnesses which established the most likely time of Kathleen Marshall's death as during the late afternoon or early evening of Friday 27 February 1998 should have been a strong point in his defence, especially since Fitzherbert had a very good alibi for that day and evening. They argue, therefore, that Fitzherbert did not have an opportunity to commit the murder and they believe that this point should have been made more cogently by his defence team, especially since the prosecution was unable to suggest a motive.

They have support from elsewhere because this is basically what Justice Kirby argued in *Mallard*. Justice Kirby said:

*"However, for me, the most important feature of the Mallard appeal was the demonstration of the near impossibility of reconciling the established movements of Mr Mallard on the day of the offence that showed that, in terms of the time of the homicide and the times of the accused's sightings, the factual mosaic did not fit together. This was a feature of the evidence which, with more time and clearer focus should have been brought out in the earlier appeals. Ultimately it did not depend on laboratory or scientific proof. It demonstrated once again the imperfections of any system of criminal justice, including our own."* <sup>xxx</sup>

In the Fitzherbert case, this submission argues (similarly) that the factual mosaic surrounding Fitzherbert's established movements and the actual Marshall murder does not fit together. As in the Farah Jama case, the evidence which convicted Fitzherbert was solely DNA based, and the circumstantial evidence suggests that he was well away from the crime scene when Kathleen Marshall

was killed. An opportunity now rests with the Commission of Inquiry to test these claims. This may mean going back to the lab's problems in the John Tonge Centre days. However, much depends on the result, not only for Fitzherbert, but also for the entire justice system. As mentioned earlier, the Fitzherbert case (and similar cases) demand a more rigorous examination of the use of DNA testing in police and forensic investigation, trials and appeals, in protecting the rights of the accused and victims of crime.

## END NOTES

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<sup>i</sup> "The Crime Lab in the Age of the Genetic Panopticon", (2017), Brandon Garrett, *Michigan Law Review*, v. 115, pp. 979ff.

<sup>ii</sup> I am indebted to Michael McHugh SC for helpful suggestions.

<sup>iii</sup> "Improving Jury Understanding and the Use of Expert DNA Evidence," (2010), Jane Goodman-Delahunty and Lindsay Hewson, AIC Reports, Technical and Background Paper 37, p.2. See also, [www.aic.gov.au](http://www.aic.gov.au)

<sup>iv</sup> See *Crucial Errors in Murder Investigations*, Ted Duhs, (2012), Bond University Press, Gold Coast, Queensland, Chapter 12, p.145 ff.

<sup>v</sup> The Frank Button case is discussed in detail in Chapter 11, *Crucial Errors in Murder Investigations*.

<sup>vi</sup> *Ibid.*, p. 129 ff. for a reference to Deanna Belzer's report. Also see *The Courier Mail*, "Forensic Testing Review Ordered", 4 March 2005.

<sup>vii</sup> See *The Forster Report*, October 2005, Action 71(iii).

<sup>viii</sup> See *The Sunday Mail*, "DNA Security Doubts Hinder Queensland Police", 19 April 2009.

<sup>ix</sup> *Crucial Errors in Murder Investigations*, (2012), Ted Duhs, op. cit.

<sup>x</sup> See "Judgement of the Court," *R v Fitzherbert*, (2000), QCA 255, p. 2.

<sup>xi</sup> See letter to the Hon. Rod Welford MP, Queensland Attorney-General and Minister for Justice, 5 August 2002, from Professor Barry Boettcher AM.

<sup>xii</sup> See letter to Crime and Misconduct Commission, "Re: Complaint of a scientific expert giving false evidence in the trial of Marc Andre Renton in 1997", 21 March 2003, from Professor Barry Boettcher AM.

<sup>xiii</sup> *Crucial Errors in Murder Investigations*, Ted Duhs, 2012, op. cit, pp. 70-78.

<sup>xiv</sup> Transcript of Proceedings, *R v Fitzherbert*, Supreme Court, Brisbane, Trial Day 5, 30 July 1999, p.357.

<sup>xv</sup> *Ibid.*, p. 365.

<sup>xvi</sup> See letters from Carol Mayne, Director DNA Evidence Pty Ltd., to Griffith University Innocence Project, re *The Matter of Mr Andrew Fitzherbert*, 14 May 2008 and 15 April 2010.

<sup>xvii</sup> "Case of Andrew Fitzherbert (DNA testing)," (1999), Bentley Atchison, Victorian Institute of Forensic Medicine, 29 March, pp. 1-6.

<sup>xviii</sup> For a summary of Dr Bentley Atchison's report on the Fitzherbert case, see *Crucial Errors in Murder Investigations*, (2012), Ted Duhs, op.cit., pp. 93-6.

<sup>xix</sup> The third expert referred to was Dr R J Mitchell, Senior Lecturer, Latrobe University, Victoria. See his letter to Legal Aid Queensland dated 21 July 1999, re *Andrew Richard Fitzherbert*.

<sup>xx</sup> This absence of any checking in the Marshall murder was confirmed by Paul Wilson and Dianne McInnes in their book *Five Drops of Blood*, (2008), New Holland Publishers, pp. 172-3.

<sup>xxi</sup> See, "Socks seized in murder hunt," (1998), Paula Doneman and Sara Bradford, *The Courier Mail*, 3 July 1998.

<sup>xxii</sup> "The Crime Lab in the Age of the Genetic Panopticon", (2017), Brandon Garrett, *Michigan Law Review*, v. 115, pp. 979ff.

<sup>xxiii</sup> *The Innocence Project In Print*, (2016), Maddy de Lone, Benjamin N. Cardozo School of Law, Yeshiva University, v. 12/ Issue 1/ Summer/Fall, p.3.

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<sup>xxiv</sup> *Miscarriages of Justice: Criminal Appeals and the Rule of Law in Australia*, (2015), Bibi Sangha and Robert N Moles, LexisNexis Butterworths, Australia, p. 183.

<sup>xxv</sup> *Murder by the Prosecution*, (2018), Andrew L Urban, Wilkinson Publishing Pty Ltd, Melbourne, p. 138.

<sup>xxvi</sup> See *The West Australian*, 14 August 2013.

<sup>xxvii</sup> See *The Australian Financial Review*, “Welcome New Hope for the Wrongly Convicted”, M.Kirby, 2 May 2013.

<sup>xxviii</sup> “Inquiry into the Circumstances that Led to the Conviction of Mr Farah Abdulkadir Jama,” (May 2010), The Honorable Frank Vincent, Department of Justice, Victorian Government. See [www.lawreform.vic.gov.au](http://www.lawreform.vic.gov.au)

<sup>xxix</sup> See also, “Genetic Injustices”, (2012), Jeremy Gans, p. 10. (<http://insidestory.org.au/genetic-injustices>).

<sup>xxx</sup> “Forensic Evidence: Instrument of Truth or Potential for Miscarriage”, Justice Michael Kirby, (2010), *Journal of Law, Information and Science*, 2 (2010), 20 (1).